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USE OF OXYGEN-CONTAINING GASES
IN FABRICATION OF GRANULAR
PERPENDICULAR MAGNETIC
RECORDING MEDIA

ABSTRACT OF THE DISCLOSURE

A granular perpendicular magnetic recording medium, comprising:

(a) a non-magnetic substrate having a surface; and

(b) a layer stack on the substrate surface, the layer stack including a granular perpendicular magnetic recording layer formed by:

5 (1) reactively sputtering a target comprised of a magnetic alloy in an atmosphere containing at least one ionized oxygen species derived from a source gas comprised of a compound of oxygen and at least one other non-metallic element; and

10 (2) oxidizing an exposed upper surface of the granular perpendicular magnetic recording layer by generating a plasma containing at least one ionized oxygen species derived from a source gas comprised of a compound of oxygen and at least one other non-metallic element and treating the exposed upper surface of the granular perpendicular magnetic recording layer with the plasma.